DOE Office of Science

FY 2007

Performance Evaluation of The Regents of the University of California for the Management and Operations of the Ernest Orlando Lawrence Berkeley National Laboratory

February 2008

CONTRACTING OFFICER'S EVALUATION

The Department of Energy, Berkeley Site Office Senior Management reviewed and discussed the recommendations of functional managers and staff concerning the appropriate numeric scores and grades with which to rate the University of California's performance in the management and operation of the Lawrence Berkeley National Laboratory. Based upon this process, an overall score of 3.6 with a grade of "A-" is recommended for the Science and Technology component of the evaluation. An overall score of 3.5 with a grade of "A-" is recommended for the Management and Operation component of the evaluation. These recommendations have been forwarded to and considered by the Office of Science and approved. This report, entitled *FY 2007 Performance Evaluation of The Regents of the University of California for the Management and Operations of the Ernest Orlando Lawrence Berkeley National Laboratory* provides the basis for my determination, and is hereby endorsed and approved.

Recommendation:

Charles W. Marshall

Date: 2/1/08

Charles W. Marshall, Contracting Officer
Department of Energy
Berkeley Site Office

Approval:

Aundra M. Richards

Date: 2/6/08

Aundra M. Richards, Site Manager
Department of Energy
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I. OVERALL SUMMARY RATING/FEE

Performance-Based Score and Adjectival Rating:
The basis for the evaluation of The Regents of the University of California (the Contractor) for the management and operations of the Ernest Orlando Lawrence Berkeley National Laboratory (the Laboratory) during FY 2007 centered on the Objectives found within the following Performance Goals:

1.0 Provide for Efficient and Effective Mission Accomplishment (Quality, Productivity, Leadership, & Timeliness of Research and Development)

2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Facilities

3.0 Provide Effective and Efficient Science and Technology Research Project/Program Management

4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection

6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)

7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs

8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

Each Performance Goal was composed of two or more weighted Objectives and most Objectives had a set of performance measures, which assisted in determining the Contractor's overall performance in meeting that Objective. Each of the performance measures identified significant activities, requirements, and/or milestones important to the success of the corresponding Objective. The following describes the methodology utilized in determining the Contractor performance rating.

Each Objective within a Goal was assigned a numerical score by the evaluating office. Each evaluation measured the degree of effectiveness and performance of the Contractor in meeting the Objective and was based on the Contractor's success in meeting the set of Performance Measures/Targets identified for each Objective as well as other performance information available to the evaluating office from other sources to include, but not limited to, the Contractor's self-evaluation report, operational awareness (daily oversight) activities; "For Cause" reviews (if any); other outside agency reviews (OIG, GAO, DCAA, etc.), and the annual 2-week review (if needed). If no performance measures/targets were utilized the description of the general expectations for the success of the objective was utilized as the baseline of the effectiveness and performance of the Contractor in meeting the corresponding Objective and in determining the score assigned. The Goal score was then computed by multiplying the numerical score by the weight of each Objective within a Goal. These values were then added together to develop an overall score for each Goal. This score was then compared to Table A to determine the overall grade for each Goal. A set of tables is provided at the end of each Performance Goal section of this document to assist in the calculation of Objective scores to the Goal score. The raw score (rounded to the nearest hundredth) from each calculation was carried through to the next stage of the calculation process. The raw score for Science and Technology and Management and Operations was rounded to the nearest tenth of a point for utilization in determining fee as discussed below. A standard rounding convention of x.44 and less rounds down to the nearest tenth (here, x.4), while x.45 and greater rounds up to the nearest tenth (here, x.50).

Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**

Table A. FY 2007 Contractor Letter Grade Scale

Based on the evaluation of *Insert Contractors Name* performance against the Goals and Objectives contained within the FY 2007 Performance Evaluation and Measurement Plan (PEMP) the scores and corresponding grades awarded for each are provided within Table B below. Specific information regarding the Contractor's performance in meeting each of the Goals and their corresponding Objectives is provided within Section II of this report.

S&T Performance Goal	Numerical Score	Letter Grade	Weight	Weighted Score	Total Score
1.0 Mission Accomplishment	3.8	A	37%	1.39	
2.0 Design, Fabrication, Construction and Operations of Facilities	3.7	A-	38%	1.41	
3.0 Science and Technology Research Project/Program Management	3.4	B+	25%	.84	
				Total Score	3.6
M&O Performance Goal	**Numerical Score**	**Letter Grade**	**Weight**	**Weighted Score**	**Total Score**
4.0 Leadership and Stewardship of the Laboratory	3.4	B+	25%	0.85	
5.0 Integrated Safety, Health, and Environmental Protection	3.3	B+	22%	0.73	
6.0 Business Systems	3.7	A-	25%	0.94	
7.0 Operating, Maintaining, and Renewing Facility and Infrastructure Portfolio	3.7	A-	20%	0.73	
8.0 Integrated Safeguards and Security Management and Emergency Management Systems	3.8	A	8%	0.30	
				Total Score	3.5

Table B. FY 2007 Contractor Evaluation Score Calculation

Performance-Based Fee Earned:
Utilizing Table B, above, the scores for each of the Science and Technology (S&T) Goals and Management and Operations (M&O) Goals were multiplied by the weight assigned and these were summed to provide an overall score for each. The percentage of the available performance-based fee that was earned by the Contractor was determined based on the overall weighted score for the S&T Goals (see Table B.) and then compared to Table C. below. The overall numerical score of the M&O Goals from Table B. was then utilized to determine the final fee multiplier (see Table C.), which was utilized to determine the overall amount of performance-based fee earned for FY 2007 as calculated within Table D. Based on the overall performance within the S&T and M&O Goals the Contractor is awarded $4,365,000 in performance based fee for FY 2007.

Overall Weighted Score from Table A.	Percent S&T Fee Earned	M&O Fee Multiplier
4.3	**100%**	**100%**
4.2		
4.1		

Overall Weighted Score from Table A.	Percent S&T Fee Earned	M&O Fee Multiplier
4.0	97%	100%
3.9		
3.8		
3.7	94%	100%
3.6		
3.5		
3.4	91%	100%
3.3		
3.2		
3.1		
3.0	88%	95%
2.9		
2.8		
2.7	85%	90%
2.6		
2.5		
2.4	75%	85%
2.3		
2.2		
2.1		
2.0	50%	75%
1.9		
1.8		
1.7	0%	60%
1.6		
1.5		
1.4		
1.3		
1.2		
1.1		
1.0 to 0.8	0%	0%
0.7 to 0.0	0%	0%

Table C. – Performance-Based Fee Earned Scale

Overall Fee Determination	
Percent S&T Fee Earned from Table C.	94%
M&O Fee Multiplier from Table C.	100%
Overall Earned Performance-Based Fee	94%

Table D. – Final Percentage of Performance-Based Fee Earned Determination

Performance Fee and Rating Adjustment Factor:

There was no performance fee and adjustment factor utilized for the FY 2007 rating period.

Performance Adjustment Determination	
Percent Fee Earned from Table D.	**94%**
Percentage of Performance Adjustment	**0**
Final Percentage of Fee Earned	**94%**
Final Performance Grade Awarded	**A-**

Table E. Performance Adjustment Factor Calculation

Based on the performance determination the Contractor is awarded $4,230,000 in performance based fee for FY2007.

II. PERFORMANCE GOALS, OBJECTIVES, AND MEASURES/TARGETS

For Science and Technology the format used by the program offices did not compute overall scores for all programs at the objective level, only at the goal level. Therefore no overall score and rating is identified at the objective level.

1.0 Provide for Efficient and Effective Mission Accomplishment (Quality, Productivity, Leadership, & Timeliness of Research and Development)

The Contractor produces high-quality, original, and creative results that advance science and technology; demonstrates sustained scientific progress and impact; receives appropriate external recognition of accomplishments; and contributes to overall research and development goals of the Department and its customers.

The weight of this Goal is 37%.

The performance evaluation narrative for goal 1.0 and its objectives is found at Appendix A of this report.

1.1 Science and Technology Results Provide Meaningful Impact on the Field

1.2 Provide Quality Leadership in Science and Technology

1.3 Provide and sustain Science and Technology Outputs that Advance Program Objectives and Goals

1.4 Provide for Effective Delivery of Science and Technology

Science Program Office	Letter Grade	Numerical Score	Objective Weight	Weighted Score	Overall Score
Office of Advanced Scientific Computing Research					
1.1 Impact	A-	3.7	40%	1.48	
1.2 Leadership	A-	3.7	30%	1.11	
1.3 Output	A	3.8	15%	0.57	
1.4 Delivery	A	3.8	15%	0.57	
				Overall ASCR Total	3.73
Office of Basic Energy Sciences					
1.1 Impact	A	3.8	50%	1.90	
1.2 Leadership	A	4.0	20%	0.80	
1.3 Output	A	3.8	15%	0.57	
1.4 Delivery	A	3.8	15%	0.57	
				Overall BES Total	3.84
Office of Biological and Environmental Research					
1.1 Impact	B+	3.4	30%	1.02	
1.2 Leadership	A-	3.5	20%	0.70	
1.3 Output	A	3.8	25%	0.95	
1.4 Delivery	A	3.8	25%	0.95	
				Overall BER Total	3.62
Office of Fusion Energy Sciences					
1.1 Impact	B+	3.4	30%	1.02	
1.2 Leadership	A-	3.5	20%	0.70	
1.3 Output	A	3.8	25%	0.95	
1.4 Delivery	A	3.8	25%	0.95	
				Overall FES Total	3.62
Office of High Energy Physics					
1.1 Impact	A	4.0	30%	1.20	
1.2 Leadership	A-	3.7	30%	1.11	
1.3 Output	A	3.8	30%	1.14	
1.4 Delivery	A	3.8	10%	0.38	
				Overall HEP Total	3.83
Office of Nuclear Physics					
1.1 Impact	A	3.9	40%	1.56	
1.2 Leadership	A	3.9	30%	1.17	
1.3 Output	A	3.8	15%	0.57	
1.4 Delivery	A	3.8	15%	0.57	
				Overall NP Total	3.87
Office of Workforce Development					
1.1 Impact	B+	3.1	25%	0.78	
1.2 Leadership	B+	3.1	30%	0.93	
1.3 Output	A	3.8	30%	1.14	
1.4 Delivery	A	3.8	15%	0.57	
				Overall WD Total	3.42

Table 1.1 - 1.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	BA Weight	Weighted Score	Overall Score
Office of Advanced Scientific Computing Research	A-	3.73	24.2%	0.90	
Office of Basic Energy Sciences	A	3.84	29.8%	1.14	
Office of Biological and Environmental Research	A-	3.62	17.4%	0.63	
Office of Fusion Energy Sciences	A-	3.62	2.1%	0.07	
Office of High Energy Physics	A	3.83	19.0%	0.73	
Office of Nuclear Physics	A	3.87	7.2%	0.28	
Office of Workforce Development	B+	3.42	0.4%	0.01	
			Performance Goal 1 Total		3.77

Table 1.2 - SC Program Office Overall Performance Goal Score Development

HQ Program Office	Letter Grade	Numerical Score	Objective Weight	Weighted Score	Overall Score
Energy Efficiency and Renewable Energy					
1.1 Impact	A-	3.7	35%	1.31	
1.2 Leadership	A-	3.7	35%	1.31	
1.3 Output	A-	3.7	15%	0.56	
1.4 Delivery	A-	3.7	15%	0.56	
				Overall EERE Total	3.73
Radioactive Waste Management					
1.1 Impact	A+	4.2	25%	1.05	
1.2 Leadership	A	3.9	25%	0.98	
1.3 Output	A	3.8	25%	0.95	
1.4 Delivery	A	3.8	25%	0.95	
				Overall RW Total	3.93
Fossil Energy					
1.1 Impact	A+	4.09	25%	1.02	
1.2 Leadership	A+	4.09	25%	1.02	
1.3 Output	A+	4.09	25%	1.02	
1.4 Delivery	A+	4.09	25%	1.02	
				Overall FE Total	4.09

Table 1.3 - Other Program Office Performance Goal Score Development

HQ Program Office	Letter Grade	Numerical Score	BA Weight	Weighted Score	Overall Score
Office of Science	A	3.77	84.0%	3.17	
Energy Efficiency and Renewable Energy	A-	3.73	9.7%	0.36	
Radioactive Waste Management	A	3.93	4.0%	0.16	
Fossil Energy	A+	4.09	2.3%	0.10	
			Performance Goal 1.0 Total		3.78

Table 1.4 - Overall Performance Goal Score Development

Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 1.5 – 1.0 Goal Final Letter Grade

2.0 Provide for Efficient and Effective Design, Fabrication, Construction and Operations of Facilities

The Contractor provides effective and efficient strategic planning; fabrication, construction and/or operations of Laboratory facilities; and is responsive to the user community.

The weight of this Goal is 38%

The performance evaluation narrative for goal 2.0 and its objectives is found at Appendix A of this report.

Objectives:

2.1 Provide Effective Facility Design(s) as Required to Support Laboratory Programs

Program	Page #
ASCR	A-7
BER	A-13
BES	A-21
FES	A-28
HEP	A-33
NP	A-40
WDTS	A-46
EERE	A-60
RW	A-68

2.2 Provide for the Effective and Efficient Construction of Facilities and/or Fabrication of Components

Program	Page #
ASCR	A-7
BER	A-14
BES	A-21
FES	A-28
HEP	A-34
NP	A-40
WDTS	A-46
EERE	A-60
RW	A-68

2.3 Provide Efficient and Effective Operation of Facilities

Program	Page #
ASCR	A-7
BER	A-14
BES	A-21
FES	A-28
HEP	A-34
NP	A-40
WDTS	A-46
EERE	A-60
RW	A-68

2.4 Utilization of Facility to Grow and Support Lab's Research Base and External User Community

Science Program Office	Letter Grade	Numerical Score	Objective Weight	Weighted Score	Overall Score
Office of Advanced Scientific Computing Research					
2.1 Effective Facility Designs	A-	3.7	10%	0.37	
2.2 Construction/Fabrication	A-	3.6	10%	0.36	
2.3 Operation of Facilities	A	3.8	70%	2.66	
2.4 Support Research Base	A-	3.6	10%	0.36	
				Overall ASCR Total	3.75
Office of Basic Energy Sciences					
2.1 Effective Facility Designs	A	4.0	20%	0.80	
2.2 Construction/Fabrication	A	4.0	20%	0.80	
2.3 Operation of Facilities	A	3.8	45%	1.71	
2.4 Support Research Base	A-	3.5	15%	0.53	
				Overall BES Total	3.84
Office of Biological and Environmental Research					
2.1 Effective Facility Designs			0%	0.00	
2.2 Construction/Fabrication			0%	0.00	
2.3 Operation of Facilities	A-	3.5	90%	3.15	
2.4 Support Research Base	A-	3.6	10%	0.36	
				Overall BER Total	3.51
Office of Fusion Energy Sciences					
2.1 Effective Facility Designs			0%	0.00	
2.2 Construction/Fabrication			0%	0.00	
2.3 Operation of Facilities			0%	0.00	
2.4 Support Research Base			0%	0.00	
				Overall FES Total	
Office of High Energy Physics					
2.1 Effective Facility Designs	B+	3.4	80%	2.72	
2.2 Construction/Fabrication	B+	3.4	20%	0.68	
2.3 Operation of Facilities			0%	0.00	
2.4 Support Research Base			0%	0.00	
				Overall HEP Total	3.40
Office of Nuclear Physics					
2.1 Effective Facility Designs			0%	0.00	
2.2 Construction/Fabrication			0%	0.00	
2.3 Operation of Facilities	A-	3.7	85%	3.15	
2.4 Support Research Base	A-	3.5	15%	0.53	
				Overall NP Total	3.67
Office of Workforce Development					
2.1 Effective Facility Designs			0%	0.00	
2.2 Construction/Fabrication			0%	0.00	
2.3 Operation of Facilities			0%	0.00	
2.4 Support Research Base			0%	0.00	
				Overall WD Total	

Table 2.1 - 2.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	BA Weight	Weighted Score	Overall Score
Office of Advanced Scientific Computing Research	A	3.75	19.8%	0.74	
Office of Basic Energy Sciences	A	3.84	40.6%	1.56	
Office of Biological and Environmental Research	A-	3.51	28.4%	1.00	
Office of Fusion Energy Sciences		0.00	0.0%	0.00	
Office of High Energy Physics	B+	3.40	6.9%	0.23	
Office of Nuclear Physics	A-	3.67	4.4%	0.16	
Office of Workforce Development		0.00	0.0%	0.00	
Performance Goal 2 Total					3.69

Table 2.2 - SC Program Office Overall Performance Goal Score Development

HQ Program Office	Letter Grade	Numerical Score	Objective Weight	Weighted Score	Overall Score
Energy Efficiency and Renewable Energy					
2.1 Effective Facility Designs	B	3.0	0%	0.00	
2.2 Construction/Fabrication	B	3.0	0%	0.00	
2.3 Operation of Facilities	B	3.0	0%	0.00	
2.4 Support Research Base	B	3.0	0%	0.00	
Overall EERE Total					0.00

Table 2.3 - HQ Program Office Performance Goal Score Development

HQ Program Office	Letter Grade	Numerical Score	BA Weight	Weighted Score	Overall Score
Office of Science	A-	3.69	100.0%	3.69	
Energy Efficiency and Renewable Energy	B	0.00	0.0%	0.00	
Performance Goal 2 Total					3.69

Table 2.4 - Overall Program Office Performance Goal Score Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 2.5 – 2.0 Goal Final Letter Grade

3.**0 Provide Effective and Efficient Science and Technology Research Project/Program Management**

The Contractor provides effective program vision and leadership; strategic planning and development of initiatives; recruits and retains a quality scientific workforce; and provides outstanding research processes, which improve research productivity.

The weight of this Goal is 25%

The performance evaluation narrative for goal 3.0 and its objectives is found at Appendix A of this report.

Objectives:

3.1 Provide Effective and Efficient Stewardship of Scientific Capabilities and Program Vision

Program	Page #
ASCR	A-9
BER	A-16
BES	A-23
FES	A-29
HEP	A-35
NP	A-41
WDTS	A-47
EERE	A-61
RW	A-68

3.2 Provide Effective and Efficient Science and Technology Project/Program Planning and Management

Program	Page #
ASCR	A-9
BER	A-16
BES	A-23
FES	A-29
HEP	A-35
NP	A-42
WDTS	A-47
EERE	A-61
RW	A-69

3.3 Provide Efficient and Effective Communications and Responsiveness to Customer Needs

Program	Page #
ASCR	A-10
BER	A-17
BES	A-24
FES	A-29
HEP	A-35
NP	A-42
WDTS	A-47
EERE	A-61
RW	A-69

Science Program Office	Letter Grade	Numerical Score	Objective Weight	Weighted Score	Overall Score
Office of Advanced Scientific Computing Research					
3.1 Effective/Efficient Stewardship	A-	3.7	30%	1.11	
3.2 Project/Program Planning & Management	A	3.8	40%	1.52	
3.3 Communications and Responsiveness	A-	3.5	30%	1.05	
				Overall ASCR Total	3.68
Office of Basic Energy Sciences					
3.1 Effective/Efficient Stewardship	A-	3.6	40%	1.44	
3.2 Project/Program Planning & Management	B+	3.4	30%	1.02	
3.3 Communications and Responsiveness	B	2.9	30%	0.87	
				Overall BES Total	3.33
Office of Biological and Environmental Research					
3.1 Effective/Efficient Stewardship	A-	3.5	20%	0.70	
3.2 Project/Program Planning & Management	A-	3.5	30%	1.05	
3.3 Communications and Responsiveness	B+	3.2	50%	1.60	
				Overall BER Total	3.35
Office of Fusion Energy Sciences					
3.1 Effective/Efficient Stewardship	B+	3.4	35%	1.19	
3.2 Project/Program Planning & Management	A-	3.5	30%	1.05	
3.3 Communications and Responsiveness	B+	3.2	35%	1.12	
				Overall FES Total	3.36
Office of High Energy Physics					
3.1 Effective/Efficient Stewardship	A-	3.6	40%	1.44	
3.2 Project/Program Planning & Management	B-	2.7	40%	1.08	
3.3 Communications and Responsiveness	C+	2.4	20%	0.48	
				Overall HEP Total	3.00
Office of Nuclear Physics					
3.1 Effective/Efficient Stewardship	A	3.9	40%	1.56	
3.2 Project/Program Planning & Management	A-	3.6	40%	1.44	
3.3 Communications and Responsiveness	B+	3.4	20%	0.68	
				Overall NP Total	3.68
Office of Workforce Development					
3.1 Effective/Efficient Stewardship	B+	3.1	20%	0.62	
3.2 Project/Program Planning & Management	B+	3.3	40%	1.32	
3.3 Communications and Responsiveness	B+	3.3	40%	1.32	
				Overall WD Total	3.26

Table 3.1 – 3.0 SC Program Office Performance Goal Score Development

Science Program Office	Letter Grade	Numerical Score	BA Weight	Weighted Score	Overall Score
Office of Advanced Scientific Computing Research	A-	3.68	17.0%	0.62	
Office of Basic Energy Sciences	B+	3.33	27.8%	0.93	
Office of Biological and Environmental Research	B+	3.35	24.3%	0.82	
Office of Fusion Energy Sciences	B+	3.36	2.4%	0.08	
Office of High Energy Physics	B	3.00	20.7%	0.62	
Office of Nuclear Physics	A-	3.68	7.5%	0.28	
Office of Workforce Development	B+	3.26	0.3%	0.01	
Performance Goal 3 Total					3.35

Table 3.2 – SC Program Office Overall Performance Goal Score Development

HQ Program Office	Letter Grade	Numerical Score	Objective Weight	Weighted Score	Overall Score
Energy Efficiency and Renewable Energy					
3.1 Effective/Efficient Stewardship	A-	3.51	50%	1.76	
3.2 Project/Program Planning & Management	A-	3.51	25%	0.88	
3.3 Communications and Responsiveness	A-	3.51	25%	0.88	
Overall EERE Total					3.51
Radioactive Waste Management					
3.1 Effective/Efficient Stewardship	A	3.9	40%	1.56	
3.2 Project/Program Planning & Management	A	3.9	20%	0.78	
3.3 Communications and Responsiveness	A	3.9	40%	1.56	
Overall RW Total					3.90
Fossil Energy					
3.1 Effective/Efficient Stewardship	A+	4.11	40%	1.64	
3.2 Project/Program Planning & Management	A+	4.11	30%	1.23	
3.3 Communications and Responsiveness	A+	4.11	30%	1.23	
Overall FE Total					4.11

Table 3.3 – 3.0 HQ Program Office Performance Goal Score Development

HQ Program Office	Letter Grade	Numerical Score	BA Weight	Weighted Score	Overall Score
Ofice of Science	B+	3.35	89.7%	3.01	
Energy Efficiency and Renewable Energy	A-	3.51	6.2%	0.22	
Radioactive Waste Management	A	3.90	2.5%	0.10	
Fossil Energy	A+	4.11	1.5%	0.06	
Performance Goal 3.0 Total					3.39

Table 3.4 - Overall Performance Goal Score Development

Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 3.5 – 3.0 Goal Final Letter Grade

4.0 Provide Sound and Competent Leadership and Stewardship of the Laboratory

The Contractor's Leadership provides effective and efficient direction in strategic planning to meet the mission and vision of the overall Laboratory; is accountable and responsive to specific issues and needs when required; and corporate office leadership provides appropriate levels of resources and support for the overall success of the Laboratory.

The weight of this Goal is 25%.

The Provide Sound and Competent Leadership and Stewardship of the Laboratory Goal measured the Contractor's Leadership capabilities in leading the direction of the overall Laboratory. It also measured the responsiveness of the Contractor to issues and opportunities for continuous improvement and corporate office involvement/commitment to the overall success of the Laboratory.

Executive Summary

For Goal 4.0, Lawrence Berkeley National Laboratory (LBNL) achieved a numerical score of **3.5**, the equivalent of a grade of **A-**. Goal 4.0 has three objectives with 13 measures.

LBNL, managed and operated by the University of California (UC), remains a unique, well-managed, and world-leading multi-program research institution. The Laboratory's extensive external partnerships, a compelling vision, and strategic plan for transformational science advance the Department of Energy's (DOE's) missions. UC and LBNL leadership plans and efforts have led to unprecedented commitments to new missions, projects, and institutional renewal.

During FY2007, the LBNL-led partnership for the Joint BioEnergy Institute (JBEI) was one of three new Bioenergy Research Centers awarded $135M over five years by the Secretary of Energy under the SC Biological and Environmental Research (BER) program. LBNL is also a major partner in the UC Berkeley campus-led Energy Biosciences Institute (EBI) under a $500M ten-year award from British Petroleum (BP).

In July 2007, the National Science Foundation (NSF) awarded the Deep Underground Science and Engineering Laboratory to the Homestake Mine site in South Dakota, whose science case has been led by LBNL since 2004. Other leading partnerships include: the Supernova Acceleration Probe (SNAP) satellite for the Joint Dark Energy Mission with NASA; a neutrino science project in Daya Bay, China; nanoscience collaborations with Intel Corporation, Lawrence Livermore National Laboratory (LLNL), and others at the new Molecular Foundry; and between the LBNL-managed Energy Sciences network (ESnet) and the Internet2 consortium. As a *national* laboratory, LBNL successfully performs a wide variety of mission-related Work for Others, which comprises about one-fourth of its annual funding (~$520M). LBNL also played a leadership role in SC's Science Laboratory Infrastructure (SLI) initiative, and was prioritized to receive three major projects totaling over $300M over the next decade to address seismic safety and modernization needs in over a dozen facilities.

LBNL's leadership pursued activities of national and international importance in FY2007. Director Steven Chu co-chaired a study for the InterAcademy Council (the world's science academies) entitled "Lighting the Way: Toward A Sustainable Energy Future," which was published in October 2007. Its' recommendations address linked climate-energy challenges and opportunities, both in the modern economies and developing nations of the world. As a follow-up to the study, Director Chu hosted a meeting at LBNL of the InterAcademy Council Panel on "Transitioning to Sustainable Energy."

Director Chu also met with President Bush and Secretary Bodman at the White House in February 2007 to advance federal efforts in biofuels and energy efficiency. Dr. Chu has presented extensively in the U.S. and internationally on "The Energy Problem and What We Can Do About It," and has received extensive media coverage including a May 2007 profile report on *The Newshour with Jim Lehrer* on PBS.

LBNL Deputy Director Graham Fleming assembled and led a committee of distinguished researchers from across the nation to identify "Grand Challenges in the Basic Energy Sciences," culminating a five-year series of scientific workshops between SC and DOE's applied mission programs. These were reported to SC's Basic Energy Sciences (BES) Advisory Committee in September 2007, and are expected to provide a roadmap for future program development, including next generation light sources for "ultra-fast science."

LBNL Chief Operating Officer (COO) David McGraw and LBNL Deputy COO Sandy Merola played a central role in supporting SC's "Science Laboratory Infrastructure Initiative (SLI)" which represents a 20-year complex-wide "mission focused" Program to modernize existing laboratory facilities, and where appropriate, build new laboratory facilities that will enhance and improve SC Laboratory operations. The LBNL COO and the Oak Ridge COO co-chaired a working group of SC Laboratory COOs to develop a management framework and set of criteria for prioritizing site infrastructure needs. LBNL's $90M Seismic Safety and Modernization Proposal was one of three SC Laboratory projects selected as a new start by the SC COO in August 2007. During FY2009-2012/13, it will replace two facility complexes and rehabilitate two other facilities at LBNL. The accepted LBNL Proposal focuses on the demolition of existing structurally inadequate buildings, replacing the buildings with much safer structures. The proposal also includes seismic upgrades to many existing structures. Starting in 2009, the SLI will support $98M in laboratory infrastructure improvements. The Laboratory received CD-0 approval for the "Phase 2 SLI project" in September 2007.

In FY2007, LBNL Leadership followed-up actions from the results of a comprehensive workplace climate survey. These included: open, brown-bag lunch meetings between LBNL leadership and staff, a new series of career development classes offered by the Berkeley Lab Institute, a more transparent career advancement system, and a new strategic approach to division diversity goals more closely coordinated with the Human Resources (HR) department that is reflected in the FY2008 PEMP measures and targets.

The Laboratory maintains a positive, proactive relationship with its local community, including regular meetings with local officials and community leaders. It's Center for Science and Engineering Education (CSEE) conducts a multi-faceted and effective science education outreach program for students at all levels as well as teachers. Secretary Bodman recognized CSEE and several LBNL scientists with outstanding mentor awards in FY2007.

4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans

For Performance Objective 4.1 LBNL met and or exceeded expectations of performance and achieved a numerical score of **3.7**, the equivalent of a grade of **A-**. Performance Objective 4.1 has five measures, each with associated target(s).

The Laboratory's participation in the EBI award is a noteworthy representation of their 2007 performance accomplishment. During the formulation of the EBI proposal, however, LBNL did not sufficiently communicate and coordinate in advance with UC, nor did UC with DOE in turn, such that exceptional efforts were needed by DOE to secure initial space for the project (turnover of Calvin lab), to resolve IP concerns, and to reach agreement with the sponsor, BP. The partnership arrangement between UC Berkeley and BP caused unplanned expenditure of laboratory resources and created issues that impacted the M&O contract terms and conditions.

Vision and Plans

LBNL updated its 2007 Business Plan for the laboratory consistent with DOE SC schedule and guidance. The Business Plan was submitted to DOE SC on time. LBNL's unique mission is: *"to deliver science-based solutions to the Nation's energy, environmental, and science needs. LBNL is noted as a world center for particle accelerator and detector innovation and design, provider of high-performance computing tools for*

*scientific applications, and a national leader in microscopy and the characterization and fabrication of nanostructured materials, and for its ability to exploit computation, bioinformatics, cutting-edge imaging technologies and structural cell biology to understand the complexity of biological system*s."

The Laboratory's Business Plan is built on six core competencies applied toward six business lines in DOE-SC's Business Plan for the Laboratory: 1) Science for a Secure and Globally Sustainable Energy Future; 2) Leading Facilities in Vacuum Ultraviolet, Soft-X-ray and Ultrafast Science; 3) Novel Materials and Nanodevices; 4) Understanding, Detecting and Preventing Energy and Environmental Causes of Disease; 5) Matter and Energy in the Universe; and 6) Advanced Scientific Computing for DOE Research Programs. Four of the five major activity initiatives in the Business Plan are considered to offer *transformational* potential benefits: 1) Integrated Energy & Environmental Research for a Sustainable Future (Helios Project), 2) JDEM R&D, 3) Optical Accelerators for the Energy Frontier, and 4) Advanced Light Source Upgrade. The fifth major activity initiative, National Energy Research Computing Center (NERSC) upgrade, is expected to offer *substantial* benefits at low risk to over 2000 users across all of SC's programs and many other DOE programs.

LBNL Deputy Director Graham Fleming assembled and led a committee of distinguished researchers from across the nation to identify "Grand Challenges in the Basic Energy Sciences," culminating a five-year series of scientific workshops between SC and DOE's applied mission programs. These were reported to SC's BES Advisory Committee in September 2007, and are expected to provide a roadmap for future program development, including next generation light sources for "ultra-fast science."

LBNL's distinctive vision, plans for broad, transformational science, and national and international leadership in areas vital to DOE's missions notably exceeds expectations.

Partnership and Collaborations

The programmatic foundations of LBNL's Helios initiative came together in FY2007. This is the Laboratory's interdisciplinary basic research effort on physical and biological pathways to convert *solar into chemical energy* for clean, abundant, and affordable supplies of carbon-neutral energy. During FY2007, the LBNL-led partnership for the JBEI was one of three new Bioenergy Research Centers awarded $135M over five years by the Secretary of Energy under the SC BER program. SC's BES program initiated commitment to LBNL's Solar Energy Research Center.

LBNL is a major partner in the UC Berkeley EBI under a $500M ten-year award from BP. Over the course of 10 years, the laboratory could receive millions of dollars in Work For Others (WFO) agreements through this partnership, thus advancing the missions of DOE and the lab, as well as addressing highly important and broader national needs

In addition to the Helios collaborations, LBNL realized further expansion and success in its partnerships and collaborations during FY2007. Other major partnerships include: the SNAP satellite for the JDEM with NASA and over a dozen institutions in the United States and abroad; U.S. project lead for a major international collaboration on a neutrino science project in Daya Bay, China; collaborating and providing instrumentation for the NSF Ice Cube astrophysical neutrino telescope project being constructed at the south pole; collaborating with the Stanford Linear Accelerator Center in the Linac Coherent Light Source project for high energy density physics and ultrafast science; nanoscience collaborations with Intel, LLNL, and others at the Molecular Foundry; and the partnership between the LBNL-managed ESnet and the Internet2 consortium. LBNL also operates DOE's Joint Genome Institute, a national DNA-sequencing user facility, in collaboration with LLNL, Los Alamos National Laboratory, Oak Ridge National Laboratory, Pacific Northwest National Laboratory, and the Stanford Human Genome Center. Collectively, these wide-ranging activities demonstrate notable progress in the development of quality partnerships and collaborations that meet expectations.

Work For Others

In FY2007, the LBNL Office of Planning and Development and the Office of the Chief Financial Officer (CFO) together produced a FY2008-2009 WFO Report and Plan that described the scope and role of the program at the Laboratory, identified major sponsors and projects, and projected program funding and costs. Information in the document assisted the Berkeley Site Office (BSO) in securing SC Headquarters' (HQ SC) approval for a prospective WFO funding level of $161.7M in FY2008. Overall, WFO continues to comprise about one-fourth of LBNL's annual operating budget, and the National Institute of Health remains the largest external sponsor, providing nearly 10% of LBNL's annual research funding. Coordinating with the BSO, LLNL, Sandia Laboratory, and the California Department of General Services, LBNL continues to perform R&D for the California Energy Commission (CEC) to build technologies and electricity reliability, and to implement a new state law enacted to ease contracting between the State and DOE laboratories. To implement new mandates requiring the on-line submission of federal grant applications through "Grants.gov" beginning in early 2007, LBNL implemented changes to its internal business process and provided formal training to over 100 principal investigators and administrators. The Laboratory implemented a Master User Agreement with the UC Office of the President to cover all UC campuses collaborating at the Molecular Foundry. Overall, LBNL met expectations for this measure, with some areas of improvement.

Workforce Diversity and Working Environment Quality

All LBNL Divisions continue to have Diversity Plans that are posted on the Laboratory's homepage. LBNL increased the number of women recruited for senior management positions in FY2007, including new Directors for the NERSC Division, Information Technology Division (Chief Information Officer), the Facilities Division, and the Human Resources Department. Each possess requisite skills and in-depth experience in industry and academia. In FY2007, LBNL commenced follow-up actions from the results of a comprehensive workplace climate survey last year. These included: open, brown-bag lunch meetings between LBNL leadership and staff; a new series of career development classes by the Berkeley Lab Institute; a more transparent career advancement system; and a new strategic approach to division diversity goals more closely coordinated with the HR department. Laboratory leadership successfully pursued initiatives aimed at improving the quality of the working environment for employees, including securing funding for new facilities and increased onsite space, and for needed seismic safety and modernization upgrades at many existing facilities. Overall, LBNL met expectations in this area, with the above improvements.

Community Relations and Science Education Outreach

LBNL released a 20-Year Long-Range Development Plan and Environmental Impact Report (EIR) in FY2007. To inform the local community and provide opportunity for comments, a Communication Plan was developed and implemented, including a public hearing and comment period, webpage, article in the community newsletter *Science on the Hill*, and leadership meetings with local officials. The City of Berkeley was the first in the nation to pass regulations on engineered nanoparticles, and although not bound by them as a federal facility, LBNL worked constructively with the community to shape the policy and has agreed to voluntarily submit an annual report on the activities of the Molecular Foundry, including methods for safely containing, handling, and disposing of research nanoparticles. LBNL engaged in proactive communications about laboratory research with the local community through its "Friend of Science" program. This program featured evening presentations by top scientists at Berkeley's Repertory Theatre on diverse subjects that included cellular imaging, cosmology, bioenergy, and reducing our carbon footprint. In early FY2007, LBNL culminated its 75th anniversary celebrations with an all-day Science Symposium and a gala dinner with community and government leaders. Secretary Bodman was the keynote speaker and paid tribute to the Laboratory's legacy.

LBNL's CSEE continues to conduct a broad range of science education outreach programs for students and teachers. It leverages modest DOE funding with grants from the NSF and private donations to provide a variety of programs for students from the elementary school level up through university undergraduates. It also provides training and mentored research experiences for middle and high school science teachers during the summer. During FY2007, CSEE conducted its third year of presenting two lessons to every fifth-grade classroom in the Berkeley Unified School District. It also launched an after school program for gifted students

with the Oakland Unified School District. Secretary Bodman recognized CSEE and several LBNL scientists with outstanding mentor awards in FY2007. Overall, LBNL's proactive and constructive community communications and relations, and its broad and highly leveraged science education outreach programs significantly exceeded expectations.

4.2 Provide for Responsive and Accountable Leadership throughout the Organization

For Performance Objective 4.2 LBNL's overall performance met most of the performance expectations and achieved a numerical score of **2.8**, the equivalent of a grade of **B**. Objective 4.2 has five measures, each with associated target(s). BSO believes that despite a great deal of progress by leadership in promoting a culture of safety awareness there are still remaining vulnerabilities with respect to line management accountability for safety that are preventing the laboratory from effectively meeting all of its mission goals in the implementation of Integrated Safety Management (ISM). The root cause of the mercury (hg) spill at the Molecular Foundry that occurred in August is a failure of the Molecular Foundry staff to incorporate the guiding principles and core functions if ISM in all aspects of work planning and execution. The Mercury spill had impact on the day-to-day operations of the Molecular Foundry. The entire facility was closed for three (3) days. Other areas within the facility were only permitted limited access for up to two (2) months.

Level of Corporate and Institutional Leadership Oversight and Response to Laboratory Issues and Opportunities is commensurate with the level of significance or severity.

The UC Contract Assurance Council was established in June 2005 at the start of the new LBNL Contract 31. It includes senior officials both within and outside of the University of California Office of the President (UCOP). The CAC meets monthly to review, advise, and provide timely support for LBNL management issues across all areas of operations and contract performance. FY2007 topical focus areas included: contract performance and the associated risk registry, follow-up actions on UC proposal initiatives, the ISM Corrective Action Plan, construction project management, emergency management, financial management reporting and controls, the Supply Chain initiative (eBuy), property and fleet management, EBI implementation, LBNL Employee Survey and other HR issues, signature authorities, utilities, and others. The annual Assurance Letter from the UCOP Vice President for Laboratory Management was submitted to the DOE Contracting Officer on July 12, 2007. The letter provided DOE with confirmation of the adequacy and functionality of LBNL management controls. UCOP senior officials and functional managers were involved in the quarterly PEMP meetings with BSO and LBNL in which the status of performance against the FY2007 performance measures was reviewed and performance concerns or performance risk discussed.

Leadership maintains an effective assurance function with cognizance of robust feedback and improvement Assurance

LBNL's Office of Institutional Assurance (OIA) was established in June 2005 at the start of the new LBNL Contract 31. It includes the Office of Contract Assurance (OCA) and the Project Management Office, and manages the performance evaluation process and associated risk registry for the Laboratory. In FY2007, OIA completed a comprehensive inventory of Lab Assurance Systems. OIA performed a Gap Analysis of assurance mechanisms against industry and audit standards, and identified Environmental Safety & Health (ES&H), Office of the CFO, Facilities, and Security as areas where gaps exist. Efforts to close these gaps were initiated in FY2007 and will continue into FY2008. OIA also implemented an Issues Management Program to institutionally track and manage Corrective Actions. On a quarterly basis, the OIA and OCA directors briefed the BSO Site Manager on assurance activities, progress, and plans.

Level of Corporate Leadership Involvement in assessing Best Practices Management Approaches and Systems utilized at the Laboratory to ensure they are comprehensive and sufficient to address risk attendant to Laboratory Operations and Strategic Mission accomplishment

OCA has developed and implemented an institutional Lessons-Learned/Best Practices database to provide a "one-stop-shop" across major areas of Lab Operations, including ES&H, Financial Management, Procurement,

Property Management, HR, and Facilities Management. A training class for all lab personnel was also developed, and usage and feedback of this system is growing. Overall, LBNL met expectations in this area, with progress in institutionalizing and communicating Lessons/Learned/Best Practices throughout the COO organizations.

Leadership is committed to a Pervasive Safety Culture and strives for continuous safety performance improvement

Safety remained a top Laboratory leadership priority. LBNL followed up with corrective actions resulting from the findings of two ISM reviews conducted in FY2006. Forty (40) major activities were completed in FY2007, exceeding the goal of 37. The remaining eighteen (18) major activities are scheduled for completion in FY2008. Ergonomics is a tenacious challenge for LBNL, comprising about two-thirds of the Laboratory's recordable injuries in FY2007. An aggressive campaign to prevent such injuries is being implemented. Ergonomists have been hired and many preventative and early intervention initiatives are underway lab-wide, focused especially where incidents have occurred. An Ergo Advocate program was initiated, with an Ergo Advocate trained in each organizational unit (over 35). LBNL worked successfully with BSO and the Oak Ridge support office to develop a Worker Safety and Health Plan to comply with the new 10CFR851 mandate. Seismic safety was the top priority in LBNL's FY2007 infrastructure planning efforts, and the first approved major project under SC's SLI initiative will seismically upgrade one LBNL facility (B85), and demolish and replace two structurally poor building complexes (B25/25B, B55/55A/56). Despite LBNL leadership's commitment to improve safety performance and culture, the Molecular Foundry mercury spill that occurred in August 2007 highlighted a weakness in the ISM principle of line-management accountability.

Leadership Undertakes Continuous Operational Improvement and Achieves Progress on Management Efficiency Initiatives . The efficiency should streamline and where appropriate automate processes, standardize and institutionalize practices and improve the management of resources.

UC and LBNL continued followed-up on the three efficiency initiatives in the Contract 31 proposal, and additional ones, particularly in the Facilities and Information Technology Divisions. The proposed eBuy, Workstation Standardization and Centralization (WS&C) initiative, and the Integrated Facilities Condition Management System (IFCMS) were all being implemented, and progress was periodically reported to the BSO. In FY2007, two additional commodities – electronic supplies and desktop computers – were added to the eBuy system (office supplies, industrial supplies, and computer peripherals implemented in FY2006). Through FY2007, the supply chain initiative is estimated to have saved ~$7.3M. Under the WS&C initiative, the total cost of ownership continued to be reduced, and the estimated savings through FY2006 is ~$0.8M, representing about 10% per workstation. Additional Information Technology (IT) improvement initiatives underway in FY2007 included: greater use of the LBNL Software Distribution webpage, which tracks download purchases and ensures use of UC and LBNL negotiated software license rates; a project to reduce the number of servers and increase data center efficiencies; and a broad IT customer needs survey aimed at best aligning services and most efficient use of overhead and recharge resources. The IFCMS Program is helping LBNL exceed the requirements in DOE Order 430.1B, Real Property Asset Management. Building assessments were completed for 550k gsf (~30% of LBNL space) in FY2007. The program also compiles Replacement Plant Value and Rehabilitation & Improvement Cost and automatically uploads the values into DOE's Facilities Information Management System (FIMS) fulfilling an annual reporting requirement. During FY2007 LBNL also implemented a Property Management Improvement Plan that enhances overall efficiency and effectiveness through automation, reduced inter-departmental dependencies and effort, and improved division asset control.

4.3 Provide Efficient and Effective Corporat e Office Support as Appropriate

The Laboratory's score for FY2007 under this performance objective is **3.8**, the equivalent of a grade of **A**. Objective 4.3 has three measures, each with associated target(s).

University Support of Programs, Business and other operations, including administration, finance, human resources, and facilities, and process and procedure improvements.

The UC LBNL Advisory Board (LAB), is a distinguished and largely external executive group co-chaired by Norm Augustine, retired CEO of Lockheed-Martin, and Rory Hume, Provost and Executive VP of Academic Affairs of the University of California. The UC LAB held its second and third meetings during FY2007, providing advice and endorsements regarding LBNL's science and technology programs, initiatives, and key areas of management and operations.

During FY2007, UC and LBNL completed implementation of 22 of the 26 management initiatives in the 2005 UC contract proposal, including providing alternative financing for three new facilities described below. The remaining four initiatives are underway, on-track and achieving progress. Three are related to the management efficiency initiatives in 4.2 above, and the fourth pertains to external certification/accreditation of LBNL HR system.

Other UC support to LBNL during FY2007 included: UC HR Benefits Office assistance on LBNL labor relations agreements and compensation programs; UC renegotiated "Y-Cal" discounted airfares which were made available to LBNL to reduce travel costs; UC IT and software support including online interactive computer ergonomics; and provision of an Integrated Learning Management System to create, host, track, and report training classes for staff.

As in FY2006, UC's involvement with and support of LBNL was not always visible to DOE HQ, and greater engagement is encouraged, including visits by UC leadership to HQ SC. UC leaders should routinely participate in visits to LBNL by high-level DOE officials. Overall, UC and LBNL met performance expectations in this area, and made notable progress in completing initiatives in the 2005 contract proposal.

The demonstrated accomplishment of the Contractor to enter into effective UC-shared appointments when appropriate.

The overall level of LBNL researcher / UC-shared appointments remained approximately level at 272. This number includes twenty-five new faculty-shared appointments, including three new LBNL Division Directors: Prof. Don DePaolo, Earth Sciences Division (National Academy of Sciences member), Prof. Arun Majundar, Environmental Energy Technologies Division (National Academy of Engineering member), and Prof. Kathy Yelick, NERSC Division. Deputy Director Fleming has negotiated the details of a formal MOU among UC Academic Affairs and HR managers at UCB and LBNL, and the agreement was signed on June 6, 2007. It clarifies search processes, rights & responsibilities, compensation procedures, performance evaluation, promotion, sabbatical leave terms, et al. LBNL Deputy Director Fleming also worked with the UCB Vice Provost for Research to gain mutual efficiencies in collaborative research and support systems that will benefit DOE programs and LBNL operations.

Effectiveness of supporting the construction of new laboratory facilities through Alternative Financing

FY2007 was a banner year in UC's support for new facilities construction at LBNL. The UC Regents approved plans and funding for two additional LBNL facilities, and construction began on a new Guest House facility.

The Helios Energy Research Facility (HERF), a 160k gsf, $160M multidisciplinary laboratory/office building to be constructed below the Molecular Foundry and National Center for Electron Microscopy in Strawberry Canyon by the end of FY2010, and the Computational Research & Theory (CRT) Facility, a 140k gsf, $90.4M, energy efficient computing sciences center and office building to be constructed into the hillside just inside the Laboratory's Blackberry Canyon gate by the end of FY2011.

The HERF will house the BP-funded EBI as well as energy-related DOE programs at LBNL. Among the options for this facility, the largest one was selected because of a $70M commitment from Governor Schwarzenegger and the State of California after the EBI competition was won. The CRT facility will house the NERSC and the Energy Sciences Network (ESNet) management group, which will be relocated back to the LBNL from a leased facility in downtown Oakland. Overall, UC and LBNL significantly exceeded expectations in this area.

In addition, the $10M, 70-room User lodging/Berkeley Guest House facility approved in FY2006 will be completed in 2009.

Opportunities for Improvement

1. Effective and timely communications between UCOP and Laboratory Leadership must occur in advance of any decision to use laboratory resources or laboratory facilities to support R&D partnership agreements and/or R&D collaboration agreements. The "terms and conditions" of such agreements should be reviewed and assessed to determine the impact (s), if any, on the terms and conditions of the M&O contract, laboratory resources, and the day-to-day operations of the laboratory. UC should ensure that laboratory resources and facilities are not over-subscribed.

2. UC needs to provide support and assistance to the Laboratory in developing an overarching set of Laboratory safety values, principles, and expectations for those UC corporate partners performing work at LBNL. UCOP needs to provide assurance that safety behaviors/expectations for corporate partners are clear, formal, understood, and implemented.

3. The "Key Personnel" provision requires that personnel identified in the contract are considered "essential and critical" to the work being performed under the contract. Any decision to divert "key personnel" to support academic or industry partnerships/collaborations must be evaluated to determine the impact(s) on DOE's expectations for laboratory performance results.

4. UC should work with the Laboratory COO and the Laboratory HR Director to ensure that position descriptions for individuals identified as contract "Key Personnel" clearly articulate leadership expectations for assigned areas of responsibility.

5. As mentioned in FY 2006 laboratory performance results, UC's involvement with and support of the Laboratory is not always visible to Headquarters. Greater engagement is encouraged, including visits by UC leadership to Headquarters-SC. UC leaders should also routinely participate in DOE and SC leadership visits to the laboratory.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
4.0 Effectiveness and Efficiency of Contractor Leadership and Stewardship					
4.1 Provide a Distinctive Vision for the Laboratory and an Effective Plan for Accomplishment of the Vision to Include Strong Partnerships Required to Carry Out those Plans	A-	3.5	40%	1.40	
4.2 Provide for Responsive and Accountable Leadership throughout the Organization	B	2.8	30%	0.84	
4.3 Provide Efficient and Effective Corporate Office Support as Appropriate	A	3.8	30%	1.14	
				Performance Goal 4.0 Total	3.4

Table 4.1 – 4.0 Goal Performance Rating Development

Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 4.2 – 4.0 Goal Final Letter Grade

5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health and Environmental Protection

The weight of this goal is 22 percent.

The Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health, and Environmental Protection Goal measured the Contractor's overall success in preventing worker injury and illness; implementation of ISM down through and across the organization; and providing effective and efficient waste management, minimization, and pollution prevention.

For FY 2007, Goal 5.0, Lawrence Berkeley National Laboratory (LBNL) earned a numerical score of **3.13**, the equivalent of a grade of **B+** based on the targets and measure of the PEMP. Goal 5.0 has three objectives with a total of 10 measures. However, as stated in the PEMP the measures and targets are to be the primary though not exclusive source for performance information.

During this rating period the laboratory committed significant resources toward the development and implementation of a comprehensive Integrated Safety Management System Corrective Action Plan (CAP). LBNL management followed up the CAP with the development of a Project Management Plan to ensure timely implementation of institutional corrective actions. The laboratory made good progress implementing the CAP. However, the effectiveness of improvements has not been validated. This must remain a high priority for FY08.

On August 16, 2007, a mercury spill in the Molecular Foundry (MF) resulted in the suspension of operations at the MF. On August 24, an investigation committee was formed and determined that the root cause of the incident was the failure to incorporate Integrated Safety Management (ISM) guiding principles and core functions at all levels of work activities. Specifically the following were not implemented: the first ISM guiding principle, *Line Management Responsibility for Safety*, the second ISM core function, *Analyze the Hazards*, and the third ISM core function, *Develop and Implement Hazard Controls.* This incident as well as other incidents involving subcontractors/vendors highlights gaps that exist in the implementation of ISM.

LBNL did well in objective 5.3. There are notable weaknesses in objectives 5.1 and 5.2 due to LBNL's failure to meet Office of Science goals for recordable injury rates and for the mercury spill at the MF. In evaluating this objective, BSO took into account the types and severity of the injuries, mainly, that approximately two thirds of worker injuries were ergonomic in nature. Other types of injury rates at the Laboratory have significantly improved, most notably in construction safety, where there has been only one recordable injury in the last two years, placing LBNL at one-tenth of the industry average.

In general, LBNL has been compliant with regulations, receiving four minor regulatory violations and one reportable radiological incident. Significant improvements are being implemented in the Laboratory Institutional Safety Programs.

5.1 Provide a Work Environment that Protects Workers and the Environment

The Laboratory's score for FY2007 under this performance objective is **2.1**, the equivalent of a grade of **C+**. Objective 5.1 has four measures, each with associated targets.

Injury Case Rates

The DART and TRC rates have continued to increase despite aggressive campaigns to reduce injury rates; the preponderance (67%) are ergonomic. LBNL implemented several initiatives during FY07 to reduce injury. Extensive review of the injury data has revealed three areas that need improvement.

Work Space Approximately two thirds of LBNL injuries are ergonomic. One of the leading causes of ergonomic injury at LBNL is the result of poorly designed or antiquated work space. Most laboratory and office work areas were not designed to current ergonomic standards. LBNL should incorporate "ergonomic sensitive" design requirements in all new construction and rehabilitation of existing work spaces that will easily meet the ergonomic standard of a "5^{th} to the 95^{th}" percentile person and ensure that improvements are used.

Work Load As LBNL attempts to lower overhead rates and increase competitiveness, work load on support organizations has significantly increased. During the last few years, laboratory operational staff has decreased while research staff has increased. The injury rate of the operational staff is significantly higher than the researchers. LBNL Management should do a work load analysis to identify existing vulnerabilities. Future organizational changes should take into consideration ahead of time the safety impacts of proposed changes, and ensure negative effects are mitigated.

Work Planning Severity of the injuries is declining, however there are still some incidents than can be directly attributed to poor work planning. LBNL has addressed this through development of a comprehensive ISM corrective action plan to improve institutional ES&H performance and address organization and cultural safety issues. Improving the effectiveness of work planning systems should bring down these types of injury.

While ergonomic injury continues to be a significant problem, injury rates in other areas such as construction safety have significantly declined. Over the past two years, LBNL has made significant improvements in construction management safety. In August, the Lab celebrated two years with only one construction-related injury, with a TRC rate of 0.6, one-tenth the average of private industry. This was due to a strong and effective partnership between EHSD and the Facilities Division. The Facilities Division Planning, Design, and Construction Department has demonstrated management commitment to safety through heightened presence in the field, continued improvements to procedures in vulnerable areas (e.g., the penetration permit process has greatly improved), increased involvement of ES&H experts in routine planning meetings, and weekly management participation in small project safety walks. Management has set clear expectations and reinforced having job hazard analyses, permits, and other required documentation available at the job sites. Project Managers and Construction Managers are expected to be "on their toes", knowledgeable, and constantly thinking about potential hazards.

Environmental Compliance

LBNL received four minor violations resulting from a sanitary sewer overflow and inspections by State of California, Department of Toxic Substances and Control and the Department of Health Services.

Radiological Incidents

There was one PAAA-reportable event in FY 2007. In March 2007, LBNL submitted a Price Anderson Amendments Act Noncompliance Tracking System report for operations outside the current DOE Laboratory Accreditation Program (DOELAP) scope. This was caused by a misinterpretation of communications between LBNL and the DOELAP program. Proper accreditation was quickly obtained after the error was discovered.

Opportunity For Improvement

LBNL failed to meet SC directed expectations for recordable injuries. While LBNL was aggressive in addressing some of the causes, there still exists some opportunities for improvement. LBNL should have a policy requiring all new and renovated laboratory and office spaces be constructed to ergonomic standards. Increased injury rates in operational staff appear to correspond with increased work load. During the last few

years laboratory operational staff have decreased while research staff has increased. LBNL needs to evaluate this situation and adjust staffing levels appropriately.

5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environment Management

The Laboratory's score for FY2007 under this performance objective is **3.4**, the equivalent of a grade of **B+**. Objective 5.2 has four measures, each with associated targets. While performance against the measures would have suggested a higher grade should be given, the BSO had to consider the impact of several safety incidents involving subcontractor/vendors and other non-LBNL workers. These reoccurring incidents highlight gaps that exist in the implementation of ISM.

In January 2006, the University of California commissioned a peer review (PR) of the implementation of Integrated Safety Management (ISM) at LBNL. In response to the findings of the PR, LBNL also initiated an internal review of seven technical reports documenting safety weaknesses in a wide variety of areas and activities. A corrective action plan (CAP) was developed to respond to the findings of both reviews.

In July 2006, a U.S. Department of Energy (DOE) validation review of LBNL's PR CAP recommended a more comprehensive review of the implementation of LBNL's Integrated Safety Management System (ISMS). The objective of the ISMS evaluation review was to determine the performance (areas of weakness, strength, and best practices) of selected elements of LBNL operations with respect to the core functions (and associated guiding principles) of ISM. This comprehensive review was conducted in September 2006. The final report, *Evaluation of Integrated Safety Management at Lawrence Berkeley National Laboratory*, was issued in November 2006 (also referred to as the McCallum-Turner [MT] Review). The MT Review resulted in a set of seven prioritized recommendations, reinforced by more specific details and specific guidance for improvement.

On March 30, 2007, LBNL completed development of a CAP, *Integrated Safety Management System (ISMS) Evaluation Corrective Action Plan*, which included the PR corrective actions and the ISMS MT Review corrective actions. The four performance measures associated with this performance objective 5.2, sets targets for effective completion of this CAP.

BSO with support from the Oak Ridge Integrated Service Center (OR-ISC) began the initial review of CAP implementation in August and followed up with a major review in late September. During this review, numerous documents were reviewed, multiple individuals were interviewed, and field activities were observed where possible. At the beginning of the review, differences were noted in the definitions used by LBNL for the term "validation." Therefore, the review was refocused, and a verification of the completed actions was performed with some qualitative assessment of field activities. Subsequent quarterly reviews will continue to verify completion of activities and the process of validating the effectiveness of the actions taken.

Overall, LBNL appears to be on track with corrective action plan implementation, with only a few exceptions. A focus on clarification of definitions involving validation and the use of effectiveness reviews should be completed as soon as possible. This clarification should also include a clear timetable on the completion of validation of effectiveness and will allow BSO to plan future activities involving validation and effectiveness as required by DOE Order 226.1A, *Implementation of Department of Energy Oversight Policy*. Additional focus should also be applied to planning and implementing an effectiveness review process, that is documented and auditable, and to completing the Issues Management System.

The four specific performance measure targets of Objective 5.2 were met or exceeded by

- JHQ training completion rate of 92%
- A 93.8% full review and electronic migration of Activity Hazard Documents
- Completion of all established MT CAP milestones for Improvement of line management accountability of safety
- Completion of 40 major CAP activities, exceeding goal of 37. (Verified by LBNL Internal Audit Services Department)

The Self Assessment processes at LBNL have been revised based on recommendations from the ISM reviews. A Technical Assurance Program (TAP) was developed and is currently being implemented. The pilot assessments for the TAP ES&H functional areas were well conducted and provided value information for feedback and improvement. Also, an Issues Management Program is in development and includes substantial improvements to Corrective Action Tracking System.

Across LBNL, divisions are generally doing work safely. Within certain groups at LBNL, employees continue to view safety as an external requirement and not as an aspect of conduct that will help them to succeed; there is resistance to following institutional safety requirements. Fortunately, none of the divisions at LBNL is operating as a whole at this level. The division safety coordinators have played a key role in the effort to make safety a priority. A few divisions are much more forward-thinking in moving their staff towards a true safety culture. Those divisions that are further along the path towards a fully-developed safety culture can be distinguished by clear management engagement with and commitment to safety. Increased collaboration among division managers is driving LBNL towards a fully developed safety culture.

Notable improvements occurred in the Occurrence Reporting and Processing System (ORPS). LBNL updated its internal ORPS Manual providing the staff with adequate guidance for conducting ORPS functions and transferred the administration of the program to the EH&S Division. There is substantial improvement in quality, timeliness and accuracy of reporting and corrective action completion.

While there is good evidence that the ISM system is being substantially improved, failures of the system are still occurring. One such incident is the Mercury Spill at the Molecular Foundry on August 16, 2007. The event, as described in LBNL's *Report of the Committee to Investigate the Mercury Spill at the Molecular Foundry, August 16, 2007* identifies the root cause as the failure to incorporate ISM guiding principles and core functions at all levels of work activities. This incident resulted in the entire Molecular Foundry being shutdown for a brief time and with specific work areas inaccessible for as long as 2 months. The cost to cleanup the mercury contamination in the Molecular Foundry was approximately $140k. The incident investigation and subsequent report did a good job identifying the root cause and making recommended corrective actions for MSD and EH&S however there was no apparent evaluation and comparison with the ISM CAP to determine whether ISMS corrective actions, once fully implemented, will be effective in preventing this type of system failure in the future.

There continues to be significant safety concerns with subcontractors performing work at LBNL. At least six events in the past eight months, including lead overexposure, LOTO violations, electrical near misses and mercury contamination as well as other concerns raised during ES&H reviews have indicated weaknesses in all five ISM core functions of vendor/service related work. LBNL Management recognized subcontractor safety business processes were less than adequate and submitted an occurrence report for recurring Vendor Safety Problems. A process improvement team was formed to correct this situation. However, BSO remains concerned whether LBNL will be able to adequately correct this situation across the institution.

Opportunities for Improvement

LBNL does not consistently apply ISM to all work performed at LBNL. The Laboratories ISM system uses an approach that controls laboratory-conducted work. However, these controls have not been implemented effectively to campus partners, vendors/subcontractors and others performing work on-site. The Laboratories existing ISM controls are not robust enough to provide adequate protection to employees and government property when these campus partners and others bring their own property/equipment and/or conduct work on site. LBNL should develop an institutional ISMS that is consistently implemented across all divisions and work performed at LBNL.

LBNL should revisit their process for validation and ensure that an effectiveness review is conducted of the key action accomplishments at an appropriate time after completion of the actions. This step is essential to the feedback and improvement process and to ensure that all improvements associated with the corrective action plan are not only completed but truly achieve the desired results. A good example of successfully using this process was the review of the penetration permit process (LBNL Letter from Howard Hatayama to Aundra

Richards, subject: Effectiveness Review of Penetration Permit Program Corrective Actions, dated May 1, 2007). The review team found problems with the implementation of the revised permit process and initiated changes that will make it much more effective. This initiative should be utilized across all of the key corrective actions to aid in continued improvement.

The division safety coordinator concept at LBNL has been noted as a best practice by external reviews, and continues to be an important foundation for integrating safety institutionally. LBNL needs to ensure safety coordinators are supported and kept fully informed regarding safety issues and occurrences in order to take best advantage of this valuable resource

5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention

The Laboratory's score for FY2007 under this performance objective is **4.0**, the equivalent of a grade of **A**. Objective 5.3 has two measures, each with associated targets.

LBNL completed all four Environmental Management System (EMS) goals and one additional milestone for FY2007. Of particular significance was the Leadership in Energy and Environmental Design (LEED) rating of GOLD for Building 67. The original design of the Foundry building was based on certification at a LEED "Silver" rating; however, LBNL was able to achieve the higher "Gold" rating for the building by implementing additional environmental measures. LBNL also significantly exceeded targets for diesel particulate material reduction and increased procurement of recycled products. Also notable was the completion of a site wide energy survey that can be used to identify future energy conservation projects.

The Environmental Management System was assessed by BSO in FY07 and received a noteworthy practice for the multiple layers of review that take place. The Waste Management group was successful at combining waste shipments with LLNL thereby reducing shipping cost. The violations identified from inspections by external regulators were few and not significant. In general, ISMS is effectively implemented in the environmental area at LBNL.

Opportunity for Improvement

LBNL needs to conduct the program Management Review in such a way to broaden and enhance awareness and ownership of LBNL's EMS, and provide a forum for senior laboratory leadership feedback on the EMPs.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Weighted Score	Total Points
5.0 Sustain Excellence and Enhance Effectiveness of Integrated Safety, Health and Environmental Protection					
5.1 Provide a Work Environment that Protects Workers and the Environment.	C+	2.1	35%	0.74	
5.2 Provide Efficient and Effective Implementation of Integrated Safety, Health and Environmental Management	B+	3.4	35%	1.19	
5.3 Provide Efficient and Effective Waste Management, Minimization, and Pollution Prevention.	A	4.0	30%	1.20	
				Performance Goal 5.0 Total	3.1

Table 5.1 – Goal 5.0 Performance Rating Development

Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**

Table 5.2 – Goal 5.0 Final Letter Grade

6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)

The Contractor sustains and enhances core business systems that provide efficient and effective support to Laboratory programs and its mission(s).

The weight of this Goal is 25 percent.

The Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s) Goal measured the Contractor's overall success in deploying, implementing, and improving integrated business system that efficiently and effectively support the mission(s) of the Laboratory.

For FY 2007, LBNL achieved the target for Goal 6.0 by successfully demonstrating there are efficient and effective business systems in place to ensure meeting the mission of the Laboratory. For the five systems evaluated: financial management; acquisition and property management; human resource management; internal audit and information management; and, technology transfer and commercialization of intellectual assets, each objective score was given a weighting.

For FY 2007 the combined numeric score is **3.7** which translates to a grade of **A-** and is based on the following accomplishments for each management system.

6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)

Objective 6.1 is a measure of the effectiveness of the financial management systems of the laboratory. A balanced scorecard model is used to measure performance in four activities: the ethics/governance/compliance activities; financial activities; people activities; and internal business activities. The balanced scorecard activities were determined in order to evaluate essential financial activities and required 86.8 points out of 100 points possible to be graded at the "meets expectations" (3.1 – 3.4 numeric score, B+ grade score) level.

Financial Management was evaluated under one measure focused on achievement of eight Balanced Scorecard Plan activities reflective of an effective Financial Management System. In evaluating the overall objective of the measure, BSO considered LBNL performance against the Balanced Scorecard, along with all other factors that ensure that LBNL has an efficient, effective and robust Financial Management System. The Laboratory's score for FY2007 under this performance objective is **3.7**, for a letter rating of **A-** under the Financial Management functional area. While performance against the measures would have suggested a higher grade should be given, the BSO had to consider the overall impact of performance in relation to the PEMP requirement that "A+" grades have: "Areas of notable performance have or have the potential to significantly improve the overall mission of the Laboratory. No specific deficiency noted within the purview of the overall Objective being evaluated." Given the noted concerns below the BSO believes there are deficiencies in financial management systems that prevent the laboratory from fully attaining all of its mission goals and therefore a slight downward adjustment is required for a fair evaluation.

The Laboratory continues to improve its funds control practices, which includes the development and implementation of Phase I (Funds Database) of the new Budget System. The new system will provide more effective cost reports, resulting in efficient funding and cost controls, thus mitigate potential financial errors. The system changes have resulted in a notable improvement in the lab processes and productivity.

The Laboratory's resolution of audit findings and recommendations showed that corrective actions were completed on or ahead of schedule. This can be attributed to the Laboratory's institution of the Corrective Action Tracking System (CATS) to consistently track audit and review findings and corrective actions.

The Office of the Chief Financial Officer (OCFO) continued its efforts in developing and producing financial policies and procedures for the lab. The OFCO developed a policy review schedule to ensure each policy is compliant with Contract 31, applicable laws and regulations and Laboratory business practices. A Self-Assessment program was initiated this year to assess practices, mitigate risk, provide assurance and identify opportunities for improvement. Three high risk areas were assessed, and the self assessments produced final summary reports, identifying suggested improvements and any resulting corrective actions.

The OCFO improved training this year by developing a Strategic Training Plan and the development of ten customized core financial training modules, which were provided to key business contacts.

The OCFO continues to support the DOE system priorities and initiatives, by being diligent in supporting Standard Accounting and Reporting System (STARS, continuing to work through reconciliation issues, and maintaining financial integrity. Another area where system upgrades should result in a notable improvement to lab processing was with the development of their automated system to manage and control the Conference Management requirements implemented by the Office of Science What previously was a labor intensive process requiring numerous personnel to implement, LBNL will be able to automate the process, meet the Office of Science requirements, while reducing the number of personnel required to process and track the conference management requests.

LBNL performance against the Financial Management Balanced Scorecard Plan produced a higher score than the BSO's final assessment of performance because there were several issues outside of the Balanced Scorecard Plan activities that raised notable concern at BSO even though all issues were self-reported and corrective actions initiated by the Laboratory.

- During the University of California year end audit, PricewaterhouseCoopers discovered several issues that required resolution. LBNL's accounts payable liability was understated by approximately $7.2M as of June 30, 2007. This was due to the Accounts Payable systems not accruing invoices that were being certified. We recognize and realize the aggressive and extensive efforts made by LBNL to reduce this understatement to approximately $1.2M for LBNL's fiscal year 2007. The underlying issue is this is a problem that has been ongoing for several years before being discovered. Further corrective actions are planned that will reduce the understatement in Fiscal Year 2008. The audit also observed that although bank reconciliations were being completed on time, they were not being approved by supervisors on a timely basis.

- LBNL also had a recent situation where a $95K invoice for import duty was paid prior to being approved. An exemption request was being processed, which if approved, would not have required payment. However, since it was paid, and if the exemption request was approved, it could have potentially been an unallowable cost if a credit or refund could not be obtained. In the end, the exemption was denied and the costs were legitimate, but the risk for unallowable costs existed due to a failure to follow existing procedure.

- Another area of significant concern was an overcosting of $336K over a period from FY2004 – FY2006. While these unrecognized costs were appropriate, they were in excess of the funding provided by DOE. After an extensive review, LBNL determined the root cause of the unrecognized costs was a result of noncompliance with the Laboratory's Accrued Liabilities Policy. UC has since reimbursed DOE for these unallowable costs. The concerns BSO have related to this situation are as follow:

    - No systematic process in place to prevent or identify the problem;
    - the problem was not a one time occurrence, but occurred over a 3 year period; and,
    - while LBNL only overcosted at the project level, the potential risk was there to have an overcosting at a funding control level, which would have resulted in an anti-deficient situation.

- While performance in total exceeded expectations BSO believes additional management emphasis may yield further performance improvements. One of the elements of a credible financial performance measurement and management system is the level of competency, independence, and objectivity of those assessing the operation of the systems. Although LBNL ensured that all financial activities comply with good financial management practices as evidenced in this year's results, the financial issues understated liabilities, identifying the correct issue when assessing transactions is an open item of which LBNL is aware and working to correct. The identification of correct issues and root causes is necessary to strengthen and correct internal controls.

6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)

Objective 6.2 is a measure of the effectiveness of the procurement and property management systems of the laboratory. Each system uses a balanced scorecard model to measure performance in four perspectives: a customer perspective; internal business perspective; learning and growth perspective; and financial perspective. Each system used its own balanced scorecard based on the guidance from Headquarters and required 86.8 points out of 100 points possible to be graded at the "meets expectations" (3.1 – 3.4 numeric score, B+ grade score) level. Each system had a significant test of its integrity this year to establish that it does indeed exceed expectations. Procurement had a peer review that had no significant findings and Property had a wall-to-wall inventory that resulted in a find rate that exceeded standards. To obtain the overall objective score, the assessments for the two systems were averaged. The Laboratory's score for FY2007 under this performance objective is **4.0** which translates to a grade of **A** and is based on the following accomplishments in each system:

Acquisition Management (Procurement)

The FY 2007 Procurement Balanced Scorecard (BSC) indicates that the Procurement Department successfully supported the Laboratory mission, complied with statutes and regulations, and met or exceeded a majority of the targets, scoring 97 points against a "meets expectations" standard of 86.8 points. During this rating period, the Procurement Department underwent a Procurement Evaluation and Reengineering Team (PERT) review with no significant findings. The PERT review is a tool used by the Department of Energy (DOE) to assess the health, compliance, efficiency, effectiveness, level of customer service, employee feedback, and use of best business practices by the Laboratory. The team is comprised of senior procurement officials from the federal Government as well as sister Laboratory personnel. The Laboratory prepared for this review and should be commended for the results.

The Procurement Department continued to maintain a high level of customer satisfaction, cost efficiency and effectiveness, and adhered to accepted best business practices. The self-assessments performed during this rating period, complied with the Procurement System Evaluation Plan, and showed no evidence of system deficiencies. Fifteen new key suppliers were added to the Laboratory's key supplier program. All of the suppliers had an overall average score of more that 3.0 which translates to a satisfactory rate. The key supplier program is a strong indicator that customers are satisfied, which validates the customer survey results. The BSC national target for key suppliers delivering on time is 84 percent, the Laboratory exceeded the national target at 86.2 percent.

The target percent of transactions placed by end users was exceeded. The target was 40 percent, the Laboratory achieved 67 percent. The cycle times continued to meet and exceed national targets.

While the Laboratory continues to work towards meeting all of the socioeconomic targets, only 3 of the 6 were met. However, the "Facility Management Contractor Small Business Advancement Award" was given to the Laboratory in recognition of its outstanding performance for the highest overall dollars and percentage increases in the small business subcontracting area. The award was presented in June of this year by the Deputy Secretary of Energy, Clay Sell, and the Director of the DOE Office of Small and Disadvantaged Business Utilization, Theresa Alvillar-Speake.

The employee survey this year was a noteworthy accomplishment. Forty-seven survey responses were received out of 49. The response rate was 95.9 percent. This is an extraordinary event given last year's response rate of 58.8 percent. While the response rate increased, there were fewer dissatisfied employees:

	FY 2005	FY 2006	FY 2007
Survey Responses	41	30	47
Surveys Distributed	55	51	49
Response Rate	74.5%	58.8%	95.9%
Satisfied Employees	34	24	42
Dissatisfied Employees	7	6	5
% of Satisfied Employees	**82.9%**	**80.0%**	**89.4%**

Property Management

Property Management scored 93 points on their Balanced Scorecard against an 86.8 point score required for meeting expectations. The notable achievements for the Laboratory's exceeding BSO expectations in Property Management are as follow:

The accuracy of sensitive property and equipment assignments was confirmed by custodians at 100 percent exceeding the balanced scorecard requirement for 98 percent accuracy. The Laboratory performed a wall-to-wall inventory and exceeded the balanced scorecard targets for number and value (98% and 99% respectively) of items for both equipment and sensitive items. This inventory was accomplished with a greater level of proof required to establish physical presence than was ever done at the Laboratory before. 94 percent of items were barcode scanned to establish evidence of item presence. The Laboratory is undertaking a redesign of its property management system and made good progress during FY 2007 in defining the system and preparing it for roll-out in FY2008. The Laboratory has put in place a project management process to help ensure the success of the improvement program and has taken numerous measures to gain acceptance of the changes before the rollout.

In a non-balanced scorecard activity the Laboratory took appropriate measures to perform a self assessment of its compliance against DOE Order 580.1 and provided its self-assessment and corrective actions to the Contracting Officer on the agreed to schedule. The Organizational Property Management Officer complemented the Laboratory on the thoroughness and presentation of the self-assessment.

Opportunities for Improvement

BSO knowing that FY 2007 was going to be a transition year for vehicle management did not include any of the balanced scorecard measures in the computation of the property management score. BSO is concerned about the vehicle local usage criteria implementation of the log system with the low compliance rate so far.

Gaps in the flowdown of ES&H requirements to subcontractors will be an area for increased oversight by BSO in FY2008.

6.3 Provide an Efficient, Effective, and Responsive Human Resources Management System

The Laboratory's score for FY2007 under this performance objective is **3.5** which equates to a letter grade of **A-**. The Laboratory achieved the completion of all six tasks in all six areas at the Formal level, significantly exceeding the expectations of the target given the effort and resources this required. The commitment to successful performance under this measure was consistent and apparent throughout the appraisal period. While performance against the measures would have suggested a higher grade should be given, the BSO had to

consider the overall impact of performance in relation to the PEMP requirement that "A+" grades have: "Areas of notable performance have or have the potential to significantly improve the overall mission of the Laboratory. No specific deficiency noted within the purview of the overall Objective being evaluated." BSO believes that as extraordinary as the human resources effort toward certification was, it highlighted that some programs were not fully in place in the human resources system warranting an adjustment to the rating. One of the elements the PEMP said would be considered for this objective is "The effectiveness of the human resources management system as validated by internal and external audits and reviews." BSO believes that the areas found to be partially meeting the certification requirements, impact the system effectiveness. In light of the three year strategic plan to move the system toward certification, it is indicative that a significant effort is still required to move the overall human resources system to maximum effectiveness BSO is also fully confident that current management has the right vision and strategy to make system certification a reality.

The focus of this objective for FY2007 was the pursuit of accreditation of the Lawrence Berkeley National Laboratory's (LBNL's) Human Resource (HR) program through a pilot initiated by the University of California (UC). LBNL's efforts this appraisal period were the culmination of efforts over the past several years during which a comprehensive set of national industry standards was developed for the major functional areas of HR against which LBNL could ascertain the degree to which its programs met, exceeded or fell short. At various points over the past several years the development of the accreditation process and the specific standards involved the input and participation of the Department of Energy, fellow Management and Operating contractors, UC, LBNL, and the National Association of Public Administration (NAPA). LBNL's accomplishments under the pilot were achieved through UC's commitment to partner with NAPA in finalizing the accreditation process, with the intent of applying it to all of the UC campuses, laboratories and medical centers.

The expectation under the measure was that LBNL would participate in the UC/NAPA pilot along with UC San Francisco campus and UC San Francisco Medical Center in conducting both a preliminary and final self-assessment of its HR programs in six major functional areas (HR Strategic Management, HR Operations and Program Assurance, Employment and Talent Management, Total Compensation and Benefits, Training and Development, and Work Environment and Employee/Labor Relations). As both self-assessments involved performing six very specific tasks relative to each of the six functional areas, as well as providing feedback to UC and NAPA on the validity of the standards and practicality of the process, LBNL's ability to fully complete the process beyond the self-assessment phases to the final point of peer review demonstrates a extremely high level of commitment to providing the necessary resources to successfully validate the process, as well as to ascertaining its own status against national standards through the Peer Review's validation.

As a result of the Peer Review, LBNL was determined to have achieved or exceeded standards in three of the six areas – HR Operations and Program Assurance (met standards), Total Compensation and Benefits (exceeded standards, identified as a Best Practice), and Work Environment and Employee/Labor Relations (met standards). The Peer Review concluded that "HR has the leadership team, plan, and elements in place to ensure that the Lab has the right leadership and professional talent in the organization to ensure mission accomplishment." Relative to the other three areas – HR Strategic Management, Employment and Talent Management, and Training and Development – the Peer Review concluded that LBNL's HR program reflected many strengths yet required further development in areas such as workforce planning, strategic recruitment, and lab-wide, comprehensive training and development. In response to this, the Laboratory is developing a 3-Year HR Strategic Plan that will lead them to achievement of the remaining standards and toward full accreditation.

6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate

The Laboratory's score for FY2007 under this performance objective is **3.7** which equates to a letter grade of **A-**. While performance against the measures would have suggested a higher grade should be given, the BSO had to consider the overall impact of performance in relation to the PEMP requirement that "A+" grades have: "Areas of notable performance have or have the potential to significantly improve the overall mission of the Laboratory. No specific deficiency noted within the purview of the overall Objective being evaluated." In light of some expressed concerns with some audits it is believed the 3.7 score is more indicative of true performance.

Internal Audit has exceeded all of its performance targets for FY 2007. It has put into place a survey process that requested feedback from the users of its products and exceeded expectations by requesting feedback within five days of audit issuance and following up with customer feedback as appropriate. Internal Audit has been receptive to BSO feedback on some of its audits. It has responded quickly to these comments and have had constructive discussions with the BSO. Internal Audit exceeded expectations by achieving 125 percent of audit plan expectations for FY 2007 including eight efficiency recommendations that were issued against an expectation for three recommendations. Direct hours effort for FY 2007 was over planned percentage (plan 88.2 percent, actual 89.4 percent) which exceeded expectations of no less than 5 percent below plan and all audit staff completed the training hours required to maintain their professional certifications, again exceeding expectations that all but one would do so.

For Information Management, LBNL, exceeded the set target of an information technology environment that enabled productive science and operations. The Laboratory's IT services continue to support increases in productivity while optimizing cost savings. Below are just some examples evidencing LBNL's continued progress in this functional area:

Improvements to network connectivity were completed in FY07, including an upgrade to ESnet This upgrade will help meet the demands expected from the future completion of the LHC project.

Resultant from an IT survey, several process improvements were either initiated or completed in FY07; most noteworthy was resolution of email storage cost concerns.

The power consumption of LBNL server systems continues in a downward trend as does the costs for telephone services.

6.5 Demonstrate Effective Transfer of Technology and Commercialization of Intellectual Assets

The Laboratory's score for FY2007 under this performance objective is **3.6** which equates to a letter grade of **A-**. The Site Office was in error to accept anything less than a goal of 100% for the reporting of inventions given the requirement in I.97 (c)(1) of the contract for such disclosure of all inventions within 60 days. Therefore an adjusted grade for this objective was given by the BSO.

The Laboratory exceeded the stated expectations in technology transfer in that 100 percent of inventions made under the contract in FY 2007 were reported to DOE within 60 days easily, beating the goal of 88 percent. The Laboratory also exceeded the standard of $1.2 Million in income from its intellectual property by obtaining $3.2 Million in income from intellectual property during the performance period.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
6.0 Deliver Efficient, Effective, and Responsive Business Systems and Resources that Enable the Successful Achievement of the Laboratory Mission(s)					
6.1 Provide an Efficient, Effective, and Responsive Financial Management System(s)	A-	3.7	30%	1.11	
6.2 Provide an Efficient, Effective, and Responsive Acquisition and Property Management System(s)	A	4.0	30%	1.20	
6.3 Provide an Efficient, Effective, and Responsive Human Resources Management System	A-	3.5	20%	0.70	
6.4 Provide Efficient, Effective, and Responsive Management Systems for Internal Audit and Oversight; Quality; Information Management; and Other Administrative Support Services as Appropriate	A-	3.7	10%	0.37	
6.5 Demonstrate Effective Transfer of Technology and Commercialization of Intellectual Assets	A-	3.6	10%	0.36	
				Performance Goal 6.0 Total	3.74

Table 6.1 – 6.0 Goal Performance Rating Development

Total Score	4.3-4.1	4.0-3.8	3.7-3.5	3.4-3.1	3.0-2.8	2.7-2.5	2.4-2.1	2.0-1.8	1.7-1.1	1.0-0.8	0.7-0
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 6.2 – 6.0 Goal Final Letter Grade

7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs

The Contractor provides appropriate planning for, construction and management of Laboratory facilities and infrastructures required to efficiently and effectively carry out current and future S&T programs.

The weight of this Goal is 20 percent.

The Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs Goal measured the overall effectiveness and performance of the Contractor in planning for, delivering, and operations of Laboratory facilities and equipment needed to ensure required capabilities are present to meet today's and tomorrow's complex challenges.

The score for Goal 7.0 is **3.65** which translates to a letter grade of **A-**. Objective 7.1 is scored 3.6 (A-) and Objective 7.2 is scored 3.7 (A-). Noteworthy performance includes maintenance expenditures in excess of the Maintenance Investment Index (MII) goal, zero Facilities Information Management System (FIMS)

deficiencies, completion of seismic surveys including corrective action plan, Molecular Foundry and User Support Building project management and SLI Modernization Initiative support.

7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs

The Laboratory's score for FY2007 under this performance objective is **3.6**, which translates to a letter grade of **A-** and is based on the performance against three measures; one for Maintenance Management, a second for Energy and Utilities Management and a third for Real Property and Space Management.

Maintenance Management was evaluated based upon meeting Maintenance Investment Index (MII) and Asset Condition Index (ACI) goals for FY 2007 and completion of maintenance related studies and reports. The MII and DMR goals are set at the beginning of the year for burdened maintenance expenditures. For FY 2007 a MII of 2.17% was achieved far exceeding the 2% goal and the DMR goal of $2.17M was met. LBNL completed all three required reports on time, including a new LBNL FY 2008 maintenance plan undergoing final edit. LBNL is credited with completing a thorough analysis and finalization of Replacement Plant Value site factors.

Energy and Utilities Management was evaluated based on meeting the five required tasks listed in the FY 2007 LBNL Comprehensive Energy Management Plan (CEMP). The draft CEMP required several iterations with DOE before it was ultimately approved in June 2007 well beyond the expected date.

The first of five CEMP tasks consisted of a collection of 12 energy and utility goals, including initiation of a project under an Energy Savings Performance Contract, conducting energy and water audits and purchasing energy efficient products. Ten of the 12 goals met expectations, which equates to a meets expectations for this first task. The second task required a minimum 2% per year reduction in energy usage per square foot (SF). Although energy usage per SF was only reduced by less than 1% from the FY 2006 figure, LBNL is ahead of schedule for meeting the 20% reduction by 2015 goal required by Energy Policy Act 2005, and therefore the task is evaluated as meeting expectations. The third task, 'secure at least 3 percent of electricity purchased from renewable energy sources' was achieved through the purchase of renewable energy certificates. The fourth task 'design new building to use 30 percent less energy than the ASHRAE 90.1 2004 standard' is rated at exceeds expectations with the Title 1 work done for the LBNL User Support Building. Performance against the fifth and last task far exceeded expectations since LBNL installed 175% of the meters planned for FY 2007.

Real property and space management reports were all completed accurately and in a timely manner. LBNL is commended for passing the DOE audit of the Facilities Information Management System with no discrepancies identified.

In addition to the performance summary above LBNL has:

- completed their Integrated Facilities Condition Management System within the planned timeframe,
- integrated the LBNL CATS Systems with the Plant Operations Maximo Work Management System; and
- reduced the facilities division vehicle fleet by 36%.

7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to support Future Laboratory Programs

The Laboratory's score for FY2007 under this performance objective is **3.7** which translates to an **A-** and is based on the performance against two measures, Integrated Site Planning and Construction/Project Management.

Integrated Site Planning performance was evaluated in three areas: 1) completion of the 2007 Ten Year Site Plan (TYSP), NEPA/CEQA compliance and completion of seismic evaluations for all permanent buildings on site.

The draft 2007 TYSP provided a well coordinated and well written summary of LBNL's a) current and future missions, b) facilities and infrastructure condition and future requirements and c) planned projects. However,

the draft TYSP was presented with serious errors in the Deferred Maintenance Table. A short extension was requested and received to allow time for correction of these errors. The extended deadline was met, however, the document had to be revised and resubmitted due to additional errors discovered in the DMR table after the deadline, and therefore, expectations were not met.

NEPA/CEQA compliance was achieved for imminent research proposals, construction projects and several non-DOE funded initiatives at the LBNL site.

Seismic evaluations were completed for all permanent structures on the LBNL site. A corrective action plan was developed for the all the structures evaluated to be structurally Poor or Very Poor. Significant progress was made in FY 2007 towards the implementation of the corrective action plan including, a) partial/full vacating of buildings 10, 25, 40, 50D, 71, and 73, b) development of successful project proposals for B71 and Seismic Phase 2, and c) planning and construction efforts for buildings 6, 10, 25, 50, 71, 72, 74, and 85.

Construction/Project Management performance was evaluated based on adherence to scope, schedule and cost baselines for the Molecular Foundry, B77 Phase 2, User Support Building, Seismic Phase 1 and General Plant Project.

The Molecular Foundry far exceeded expectations by completing CD-4B ahead of schedule and with enough contingency remaining to purchase additional scientific equipment. In addition, the building achieved a Gold level LEED certification.

Although LBNL aggressively pursued bidders for the B77 Phase 2 construction subcontract, only one bid was received and it was significantly over budget. LBNL replanned the work, splitting it into smaller bid packages and fewer phases and reducing scope in order to keep the project within cost and schedule baselines. The CD-3 was approved in September 2007.

The ALS User Support Building project (USB) responded very well to a significantly different funding profile following the FY 2007 CR. The execution plan was restructured to reflect PED funds reduced from $3M planned to $1.5M and increased construction funding in FY 2009. Demolition activities were completed within the budgeted $1.4M. The project was on schedule and within budget through the fiscal year.

LBNL's Seismic Phase 1 project achieved CD-1 approval in October 2006. The laboratory received authorization to proceed with design phase in May 2007. The project is on schedule and within scope and budget.

General Plant Project proposals are reviewed and approved by LBNL senior management (Laboratory Director, Deputy Director, and ALDs). General Plant Projects were managed properly for cost and schedule, however, the LBNL Internal Audit Services Department issued a Small Construction Projects Audit Report in November 2007 with recommendations DOE would expect LBNL to address in 2008.

In addition to the performance summary above LBNL has:

- developed preconceptual documentation for the SLI Modernization Program ($255M) and started Conceptual Design for the Seismic Phase 2 project the first of three SLI Modernization projects.
- completed a Long Range Development Plan for the University of California.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
7.0 Sustain Excellence in Operating, Maintaining, and Renewing the Facility and Infrastructure Portfolio to Meet Laboratory Needs					
7.1 Manage Facilities and Infrastructure in an Efficient and Effective Manner that Optimizes Usage and Minimizes Life Cycle Costs	A-	3.6	50%	1.80	
7.2 Provide Planning for and Acquire the Facilities and Infrastructure Required to support Future Laboratory Programs	A-	3.7	50%	1.85	
				Performance Goal 7.0 Total	3.65

Table 7.1 – 7.0 Goal Performance Rating Development

Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 7.2 – 7.0 Goal Final Letter Grade

8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems

The Contractor sustains and enhances the effectiveness of integrated safeguards and security and emergency management through a strong and well deployed system.

The weight of this Goal is 8 percent.

The Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM) and Emergency Management Systems Goal measured the Contractor's overall success in safeguarding and securing Laboratory assets that supports the mission(s) of the Laboratory in an efficient and effective manner and provides an effective emergency management program.

For Goal 8.0, Lawrence Berkeley National Laboratory (LBNL) achieved a numerical score of **3.76**, the equivalent of a letter grade of **A**. Goal 8.0 has four objectives with a total of 10 measures. The objective related to protection of classified information doesn't apply because the Laboratory does no classified work under its contract.

In the area of emergency management, the Laboratory accomplished or exceeded all measures in a timely and proactive manner. Key documents and plans were completed with extensive teamwork, diligence, and high quality. While the Emergency Management Program met or exceeded all FY07 performance measures an external assessment determined that the standard industrial program of NFPA 1600 does not meet the DOE O 151.1C program requirements and there is no written exclusion to the order that permits excluding the hazard survey and hazard screening process. LBNL has developed a CAP and initiated the Base Plan Assessment. However, this is a significant area of concern for FY08 and will require additional resources in emergency response positions for LBNL to become compliant with the DOE O 151.1C base program requirement.

LBNL continued to perform exceptionally well in the CyberSecurity program and is a leader in the SC Complex. As a noteworthy accomplishment, BSO recognizes LBNL's achievement of a three year Authority-to-Operate (ATO) for all of it's IT enclaves. The extensive efforts by the Laboratory to obtain their ATO resultant from successful outcomes of the Security Test & Evaluation process and third-party reviews provided key evidence of having a robust and effective Cyber Security Program. LBNL continues to exceed expectations in CyberSecurity.

LBNL has also continued to perform well with protection of special nuclear material. A peer review found the safeguards program to be in full compliance and no findings were identified. All nuclear Material safeguard processes and activities were completed on schedule. The Laboratory developed and received approval for Environment Health and Safety (EH&S) Procedure 740, implementing DOE Nuclear Material Control and Accountability requirements, underwent a peer review of its safeguards program and procedure, and completed all corrective actions ahead of schedule. The Laboratory also continued to control and maintain Special Nuclear Material in accordance with safeguard processes and activities. All inventories, reports, and renewals were completed and submitted on time, and Radioactive Waste Authorization renewals and retraining were completed as required.

8.1 Provide an Efficient and Effective Emergency Management System

The Laboratory's score for FY2007 under this performance objective is **3.4**, the equivalent of a letter grade of **B+**. While performance against the measures would have suggested a higher grade should be given, the BSO had to consider the overall impact of performance in relation to the PEMP requirement that "A+" grades have: "Areas of notable performance have or have the potential to significantly improve the overall mission of the Laboratory. No specific deficiency noted within the purview of the overall Objective being evaluated." BSO has to consider an independent DOE assessment identified that the program did not comply with the DOE Emergency Management Order 151.1C. LBNL has been implementing emergency management through NFPA 1600 which is not equivalent to the DOE O 151.1C. The primary finding in the assessment was that LBNL has not conducted a hazard survey and screening per the DOE requirement. In response, LBNL developed and began implementation of a corrective action plan and these activities have been incorporated into the FY08 PEMP. LBNL exceeded expectations within the specific performance measures of the objective however this deficiency was serious enough to have BSO rate the emergency management system as only meeting expectations.

Objective 8.1 has three measures.

The Laboratory completed and submitted all four Emergency Management Program Metrics Reports, two Emergency Management Readiness Reports and one Emergency Readiness Assurance Plan Report on schedule to BSO. The 12 primary members of the Emergency Operations Center attended at least of two training sessions during FY 2007. The training courses involved the Incident Command System, National Incident Management System, Standard Emergency Management System, National Response Plan, and a variety of other courses from Emergency Operations Center Position Training to wildland fire and earthquake response training.

The MLX Fire Alarm Monitoring System "backbone" (9 nodes) was completed and communications were established with LLNL by December 2006. The system continues to be monitored from LBNL and LLNL. (Note: Connection of nodes to fire alarm panels within Lab buildings not included in this phase).

The 12 primary members of the Emergency Operations Center participated in a minimum of two of the five exercises during the fiscal year. The exercises held involved scenarios relating to an earthquake, a shooter, select agents, and HAZMAT spill, in addition to a DOE "No-Notice Exercise."

8.2 Provide an Efficient and Effective System for Cyber-Security

The Laboratory's score for FY2007 under this performance objective is **4.0**, the equivalent of a letter grade of **A**. Objective 8.2 has three measures.

LBNL exceeded the target with no POA&Ms overdue for FY07. The three-year Authority-to-Operate was granted to LBNL in FY07 by BSO. This was resultant from a positive outcome from a rigorous Security Test and Evaluation process, peer reviews and one highly reputable external consultant. The results for this review stand in stark contrast to the process for the last such review in that the issues were minor this time, with the consultant remarking how much better the laboratory had done in relation to the rest of the DOE complex. In addition, LBNL was subject to several IG audits in the area of Cyber Security with noted successes.

LBNL exceeded the target to train employees on the updated computer security training program. The three-year Authority-to-Operate was granted to LBNL in FY07 by BSO. This was resultant from a positive outcome from a rigorous Security Test and Evaluation process, peer reviews and one highly reputable external consultant. In addition, LBNL was subject to several IG audits in the area of Cyber Security with noted successes.

Despite the increasing covertness of cyber attacks, the hostile incidents at LBNL have been in a downward trend every year since 2004. With over 4 billion connection attempts in FY07, only 37 incidents have occurred. These incident numbers are not comparable across all DOE sites and therefore are not an infallible indication of program strength; however it is well noted that these numbers are down to only a very small fraction (4%) of what they were 3 years ago. Additionally the LBNL systems were the subject of penetration testing by both Onpoint (ST&E) and KPMG with no successful exploitations.

The Bro Intrusion Detection system which provides a low-cost means to experiment with new approaches and incorporate leading-edge research continues to provide open source software from both the operations and research sides of LBNL to the entire world. In FY07, LBNL made numerous presentations about Bro deployments (including the DOE Cyber Security Conference in Anaheim and the University of California Computing Services Conference). LBNL continues to assist Fermi with deploying Bro to supplement FNAL's existing monitoring strategies.

8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, Classified Matter, and Property

The Laboratory's score for FY2007 under this performance objective is **3.4**, the equivalent of a letter grade of **B+**. Objective 8.3 has four measures.

LBNL conducted a peer review of compliance with procedure EHS 740, "Nuclear Material Control and Accountability (revision 4)" in February 2007, which implements DOE M470.4-6, "Nuclear Material Control and Accountability". There were no findings resulting from this review. All four quarterly nuclear material inventories and associated reports were completed by September 2007, as required. All Radiological Work Authorization (RWA) renewals and retraining were completed for those authorizations governing the use and/or storage of material controlled through the Nuclear Material Management and Safeguards System program. While performance against the measures would have suggested a higher grade should be given, the BSO had to consider the overall impact of performance in relation to the PEMP requirement that "A+" grades have: "Areas of notable performance have or have the potential to significantly improve the overall mission of the Laboratory. There were no deficiencies noted but also the performance while commendable did not provide evidence of the type of performance exceeding expectations that controls would be effective and efficient. Absent the evidence of significant improvement or potential for improvement to the overall mission of the Laboratory the BSO made the decision to rate this area at the meets expectations level.

8.4 Provide an Efficient and Effective System for the Protection of Classified and Sensitive Information

Objective 8.4 does not apply. LBNL does not have classified or sensitive information.

ELEMENT	Letter Grade	Numerical Score	Objective Weight	Total Points	Total Points
8.0 Sustain and Enhance the Effectiveness of Integrated Safeguards and Security Management (ISSM)					
8.1 Provide an Efficient and Effective Emergency Management System	B+	3.4	20%	0.68	
8.2 Provide an Efficient and Effective System for Cyber-Security	A	4.0	65%	2.60	
8.3 Provide an Efficient and Effective System for the Protection of Special Nuclear Materials, Classified Matter, and Property	B+	3.4	15%	0.51	
8.4 Provide an Efficient and Effective System for the Protection of Classified and Sensitive Information	N/A	N/A	0%	0	
				Performance Goal 8.0 Total	3.79

Table 8.1 – 8.0 Goal Performance Rating Development

Total Score	**4.3-4.1**	**4.0-3.8**	**3.7-3.5**	**3.4-3.1**	**3.0-2.8**	**2.7-2.5**	**2.4-2.1**	**2.0-1.8**	**1.7-1.1**	**1.0-0.8**	**0.7-0**
Final Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F

Table 8.2 – 8.0 Goal Final Letter Grade